# NASA Space Shuttle Program (SSP) Mission Management Team (MMT) STS-114 Minutes of Meeting July 29, 2005

The STS-114 Flight Day 4 (FD4) MMT meeting, chaired by Deputy Manager, SSP, JSC-MA/Wayne Hale, was held July 29, 2005 at 1:00 p.m. Central Time (CT), Johnson Space Center (JSC), Building 30, Room 118. Member organizations supported at JSC and remote sites by video teleconference. Roster sheets for those that participated in this meeting are available. Following are highlights of the issues that were discussed.

## A. Introduction – MMT Chairman

Mr. Hale presented a photograph of the International Space Station (ISS) and docked Space Shuttle as they crossed the sun. The photo is located at: <a href="http://antwrp.gsfc.nasa.gov/apod/astropix.html">http://antwrp.gsfc.nasa.gov/apod/astropix.html</a>

#### B. Flight Status - Mission Operations Directorate (MOD) Failure Summary

JSC-DA/Phil Engelauf summarized FD4 mission events, including 1) the unberth and installation of the Multipurpose Logistics Module (MPLM), 2) the focused inspection using the Orbiter Boom Sensor Subsystem (OBSS) and data downlink, 3) inspection data downlink for Wing Leading Edge System (WLES), and 4) extravehicular activity (EVA)-1 preparation and overnight 10.2 pounds per square inch (psi) cabin repress. Only six of the requested 11 OBSS inspection locations were performed due to timeline constraints. One of these six was missed due to the Pan and Tilt (P&T) drift situation.

Mr. Engelauf reported that no new failures with operational impacts have been logged. Mission STS-114 is proceeding with the nominal timeline.

#### C. ISS

JSC-OA/Kirk Shireman reported ISS Program is working the following anomalies:

- MPLM Pressure Anomaly This issue will be worked in the post-docked stage.
- Control Moment Gyroscope (CMG) There have been four CMG anomalies, including one occurrence during the MMT meeting.

#### **D. Mission Integration Status**

JSC-MO/Robert Galvez, STS-114 Flight Manager, in relating consumables transfer activity, noted that 1) the hardware setup for nitrogen  $(N_2)$  transfer is complete, 2) the current oxygen  $(O_2)$  margin is 21 hours, and 3) two contingency water containers (CWCs) and two portable water reservoirs (PWRs) are complete. He added that an additional flight day would help in providing timeline margin to address hardware transfer changes.

#### E. Orbiter and Government-Furnished Equipment (GFE) Status

JSC-MV/Steve Poulos reported that the Leading Edge Structure Subsystem/Reinforced Carbon-Carbon (LESS/RCC) Problem Resolution Team (PRT) is now tracking three of the original five potential impacts. One, previous thought of as an impact has been screened out. The Wing Leading Edge Impact Detection System (WLEIDS) team has identified ten areas of interest for RCC inspection. All RCC inspection requested is for the port side, panels 6, 7, and 10.

### F. <u>Integrated Anomalies/Issues Summary</u>

MSFC-MP71/Helen McConnaughey presented the SE&I Integrated Anomalies list, located on the MMT website at:

http://sspweb.jsc.nasa.gov/webdata/mmtmeeting/flt/114/050729.1300\_D4/12\_Integrated Anomalies Issues Summary.pdf

#### G. Action 114-MMT-005 Power-down Options For A Potential Additional Flight Day

Action 114-MMT-005 to Mission Operations Directorate (MOD), to review and present power-down options for a potential additional FD, was closed. Mr. Engelauf reported that currently there are 21 hours of margin ( $O_2$  limited) due to the Booster Fan Bypass development test objective (DTO), and putting the KU to standby when not needed. If the extra day is added, MOD recommends putting it between FD9 and 10. It is highly likely that the cryo margin will be available without significant impacts. A decision from MMT is requested by FD7.

#### H. Action 114-MMT-004 Impacts If The Mission Resulted In A Delay In STS-121

Action 114-MMT-004 to ISS, to review the impacts if the mission resulted in a delay in STS-121, was closed. Mr. Shireman reported ISS Program would like MMT to consider the Shuttle staying an extra day so that additional transfers could be accomplished. The following three CHITs were opened regarding these transfers:

- CHIT 3011 Modification of MPLM transfer
- CHIT 3013 Optimization of Mid-deck transfer
- CHIT in work Preparing rotary joints motor controller (RJMC) hardware for potential EVA.

ISS would also like to discuss all items that Shuttle could leave behind. Action 114-MMT-006 was assigned to Flight Operations and Integration to assess the feasibility of

changes to Mid-deck and MPLM stowage, and to provide an impact assessment of increasing the mission by an additional docked day. The action is due July 31, 2005.

## I. <u>Debris Data Collection and Processing</u>

Ms. McConnaughey reviewed screenings in progress, following by the viewing of videos from the Left and Right Solid Rocket Booster (SRB) external Tank (ET) Camera.

## J. TPS Damage Summary

Boeing-KSC/Dan Bell summarized the TPS Damage Assessment, and showed photos and diagrams of the following identified areas:

- Protruding Ceramic Shim Lower Forward Fuselage (Site 133-01) Potential for early transition.
- Protruding Gap Filler at Lower Forward Fuselage (Site 134-01) Potential for early transition.
- Protruding material on Side Forward Fuselage (Site 136-02) This material is currently being identified.
- Blanket Damage Near Window 1 Discussions have started regarding the potential
  for an EVA for thermal repair of the blanket. This is a low heating environment. It is
  unclear if this damage is the result of an impact or a failure in performance. Photos
  indicate there is a hole in the batting. Currently, it is not believed that the bonding
  has given away at the bond line, as there is no red color showing.
- Right hand NLGD Tile Damage The primary thermal barrier is still intact.
- Left Wing Tile Damage This has been flagged for inspection. Preliminary data has the depth at 1.7".
- Right Wing Chine Tile Damage Preliminary data has the depth at .27".
- Left hand Inboard Elevon Tile Damage Imagery indicates this is very shallow.
- Protruding Blanket on Vertical Tail This is a new item.

# K. Reusable Solid Rocket Motor (RSRM)/ SRB Post-Launch Preliminary Hardware

MSFC-MP01/Mike Rudolphi gave a summary of the propulsion status. Preliminary data indicates Main Propulsion System (MPS) performance on launch was nominal, as well as flight dynamics, loads, and thermal profiles. RSRM/SRB assessments also indicate nominal conditions.

# L. Management Decisions Summary

No management decisions were made at today's MMT. Mr. Hale polled the MMT and received concurrence that FD5 should proceed as planned with scheduled EVAs.

## M. Conclusion

Mr. Hale indicated the next MMT is scheduled for 1:00 p.m. CDT, Saturday, July 30, 2005.

Detailed information on all assigned actions for this meeting can be found on the MMT Action log, located on the MMT web site at: http://sspweb.jsc.nasa.gov/webdata/mmtmeeting/flt/114/050729.1300 D4/actionlog.pdf

The MMT web site is available at <a href="http://sspweb.jsc.nasa.gov/mmt/">http://sspweb.jsc.nasa.gov/mmt/</a>.

The meeting adjourned at 3:06 p.m. CT.

MMT: July 29, 2005

# **Minutes Prepared By:**

Brenda S. Johnson July 29, 2005 Minutes Writer Date

**Approvals:** 

Eddie King July 29, 2005

MMT Secretary Date

J. J. Conwell July 29, 2005

Customer Support Room (CSR) Duty Officer Date

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Brian Dreen	U5A 15S	7126266	
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Steve Poulos	MV	33307	·
Janesta Ellerts	NASA	3734	
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MICHAELP. RALSKY	NASA/HO/4	202-358-193	r
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Jacob Mentan	NASA HO! SEMD	202-358-15	:'7
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David Marta	MSEC MP4)	255-544-3549
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PAT LAMPZON	KATA -SIC	1-4004
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# AUG 01 2005 16:45 FR 321 867 7648 TO 82814834082 P.04 **MEETING ATTENDANCE ROSTER** - PLEASE PRINT -Meeting Title Date Time STS-114 On-Orbit MMT Telecon 07-29-2005 14:00 Location LCC/4P10 NAME ORGANIZATION/MAILING ADDRESS TELEPHONE Bob HOLL NASA PHL 861-9321 DON HAMMEL NASA PH.L 1.9315 TERESA M. Annulis USA USK-217 1-7432

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